

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Application No. 10/041,736
Attorney Docket No. Q68034

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A data transmission/reception system comprising:
 - a plurality of information transmitters connected to nodes on a bus, for transmitting/receiving data through a connection established between the nodes;
 - a connection establishing device for establishing a connection at each node;
 - a connection status information holding device for holding connection status information indicating a managing status of isochronous resources as bus resources while updating it during the execution of the connection establishment at each node;
 - a connection status information referring device for referring to the connection status information; and
 - a processing executing device for executing predetermined processing to avoid unmanageable status of the [[bus]] isochronous resources when it is determined that the managing status of the bus resources is out of a permissible range,
wherein the managing status of the isochronous resources indicated by the connection status information includes, in addition to an unknown status, a valid status, an invalid status, and a status of processing being executed.

2. (original): The data transmission/reception system according to claim 1, wherein

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a plurality of connection establishments are provided corresponding to types of the connections, and

the connection status information holding device holds the connection status information for each connection establishment.

3. (original): The data transmission/reception system according to claim 1, wherein the processing executing device generates bus resetting if a predetermined number or more of bits of the connection status information set in unknown statuses are present among connections to be established on the bus.

4. (canceled).

5. (original): The data transmission/reception system according to claim 1, wherein the connection establishments include processing for allocating a channel for interconnecting the nodes, and processing for allocating a bandwidth necessary for data transmission/reception, and

the connection status information holding device updates the connection status information to an unknown status if a transaction in each processing results in a timeout or a data error.

6. (original): The data transmission/reception system according to claim 2, wherein

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the bus is a serial bus compliant with IEEE 1394 Standard, and

the plurality of connection establishments include establishment of a Broadcast-out connection, establishment of a Broadcast-in connection, and establishment of a Point-to-point connection.

7. (original): The data transmission/reception system of claim 6, wherein the plurality of connection establishments includes restoration of the Broadcast-out connection, restoration of the Broadcast-in connection, and restoration of the Point-to-point connection in accordance with connection restoration carried out to restore the connection at each node before a passage of predetermined time after resetting of the connection established following the bus resetting.

8. (currently amended): A connection establishing method for establishing a connection between nodes of a data transmission/reception system in which a plurality of information transmitters connected to the nodes on a bus transmit data, comprising the processes of:

holding connection status information indicating a managing status of isochronous resources as bus resources while updating it during the execution of the connection establishment at each node;

referring to the connection status information; and

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executing predetermined processing to avoid unmanageable status of the [[bus]]
isochronous resources when it is determined that the managing status of the bus resources is out
of a permissible range,

wherein the managing status of the isochronous resources indicated by the connection
status information includes, in addition to an unknown status, a valid status, an invalid status,
and a status of processing being executed.

9. (original): The connection establishing method according to claim 8, wherein
a plurality of connection establishments are provided corresponding to types of the
connections, and

the connection status information holding process holds the connection status information
for each connection establishment.

10. (original): The connection establishing method according to claim 8, wherein
the predetermined processing executing process generates bus resetting if a
predetermined number or more of bits of the connection status information set in unknown
statuses are present among connections to be established on the bus.

11. (canceled).

12. (original): The connection establishing method according to claim 8, wherein

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the connection establishments include processing for allocating a channel for interconnecting the nodes, and processing for allocating a bandwidth necessary for data transmission/reception, and

the connection status information holding process updates the connection status information to an unknown status if a transaction in each processing results in a timeout or a data error.

13. (original): The connection establishing method according to claim 9, wherein the bus is a serial bus compliant with IEEE 1394 Standard, and the plurality of connection establishments include establishment of a Broadcast-out connection, establishment of a Broadcast-in connection, and establishment of a Point-to-point connection.

14. (currently amended): An information transmission/reception apparatus connected to a node on a bus, for transmitting and receiving data through a connection established with another node, comprising:

a connection establishing device for establishing the connection with another node;
a connection status information holding device for holding connection status information indicating a managing status of isochronous resources as bus resources while updating it during the execution of the connection establishment;

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a connection status information referring device for referring to the connection status information; and

a processing executing device for executing predetermined processing to avoid unmanageable status of the [[bus]] isochronous resources when it is determined that the managing status of the bus resources is out of a permissible range,

wherein the managing status of the isochronous resources indicated by the connection status information includes, in addition to an unknown status, a valid status, an invalid status, and a status of processing being executed.

15. (original): The information transmission/reception apparatus according to claim 14, wherein

a plurality of connection establishments are provided corresponding to types of the connections, and

the connection status information holding device holds the connection status information for each connection establishment.

16. (original): The information transmission/reception apparatus according to claim 14, wherein

the processing executing device generates bus resetting if a predetermined number or more of bits of the connection status information set in unknown statuses are present among connections to be established on the bus.

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17. (canceled).

18. (original): The information transmission/reception apparatus according to claim 14, wherein

the connection establishments include processing for allocating a channel for interconnecting the nodes, and processing for allocating a bandwidth necessary for data transmission/reception, and

the connection status information holding device updates the connection status information to an unknown status if a timeout or a data error occurs in each processing.

19. (original): The information transmission/reception apparatus according to claim 15, wherein

the bus is a serial bus compliant with IEEE 1394 Standard, and

the plurality of connection establishments include establishment of a Broadcast-out connection, establishment of a Broadcast-in connection, and establishment of a Point-to-point connection.

20. (original): The information transmission/reception apparatus according to claim 15, wherein

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the plurality of connection establishments includes restoration of the Broadcast-out connection, restoration of the Broadcast-in connection, and restoration of the Point-to-point connection in accordance with connection restoration carried out to restore the connection at each node before a passage of predetermined time after resetting of the connection established following the bus resetting.